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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NEGRON, DANIEL L

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,326

Applicant(s)

ANNAMPEDU ET AL.

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,10-15,17,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 6,8,9,16 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 10, 11, 12, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ashley et al U.S. Patent No. 6,657,802.

Regarding claim 11, Ashley et al disclose an apparatus for detecting data comprising an interpolator (228) adapted to generate one or more interpolated sample sequences from the data wherein each interpolated sample sequence has a different corresponding phase relative to the data (column 3, lines 25-35).

Ashley et al further disclose a detector (252) adapted to generate a distance measure between a portion of each interpolated sample sequence and an ideal sample sequence, wherein the ideal sample sequence corresponds to peaks in the data, generate signal asymmetry (215) information for the portion of each sample sequence (column 4, lines 39-56).

Furthermore, although Ashley et al does not explicitly show that an ideal sample sequence corresponds to peaks in the data, Ashley et al does show that data corresponds to digital pulses. It is considered that in conventional data detection systems, digital pulses are converted from analog peaks through elements such as an analog-to digital converter (222),

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therefore it is considered that the reference meets the limitations of the Applicant's invention as claimed (column 3, lines 11-21).

Ashley et al further discloses a detector to select a sample sequence based on the distance measures for use in detecting the data and adjust the ideal sample sequence based on the signal asymmetry information (column 3, lines 3-10).

Regarding claim 12, Ashley et al disclose an apparatus for detecting data wherein the data is a sample sequence read from a recording channel (208, column 2, lines 58 through column 3, line 27).

Regarding claims 1, 2, and 19, method claims 1 and 19 are drawn to the method of using the corresponding apparatus claimed in claim 11. Therefore method claims 1 and 19 correspond to apparatus claim 11 and are rejected for the same reasons of anticipation as used above.

Regarding claim 10, Ashley et al disclose a method wherein the data is synchronous data (column 2, lines 7-22).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashley et al U.S. Patent No. 6,657,802 in view of Reed U.S. Patent No. 6,549,351.

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Regarding claim 13, Ashley et al disclose an apparatus for detecting data with all the limitations of claim 11 as discussed above but fail to show where peak levels are used to search for an RRO address mark.

However, Reed discloses a device for data detection wherein peaks are used to detect RRO marks (i.e. RRO bit) for the purpose of compensating for repeatable run-out (column 5, lines 24-44).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the apparatus for detecting data disclosed by Ashley et al with the teachings of Reed in order to improve data detection and transfer by providing compensation of repeatable run-out.

Regarding claim 3, method claim 3 is drawn to the method of using the corresponding apparatus claimed in claim 13. Therefore method claim 3 corresponds to apparatus claim 13 and is rejected for the same reasons of obviousness as used above.

5. Claims 4, 5, 7, 14, 15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashley et al U.S. Patent No. 6,657,802 in view of Rezzi et al U.S. Patent No. 6,043,943.

Regarding claims 14, 15, and 17, Ashley et al disclose an apparatus for detecting data comprising all the limitations of claim 11 including a detector for adjusting a sample sequence based on signal asymmetry information as discussed above but fails to explicitly show the signal asymmetry information being a sum of values (indicating a degree of the asymmetry) corresponding to one or more positive and negative peaks, and wherein the signal asymmetry information is averaged over a number of successful attempts to read data.

Rezzi et al however, disclose an apparatus for asymmetry correction wherein asymmetry is defined as a value normalized by an average value of positive and negative peaks (column 1, lines 33-48). It is considered that an average of positive and negative peaks is a sum of values corresponding to one or more positive and negative and can only be detected through successful attempts to read data.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the apparatus disclosed by Ashley et al with the teachings of asymmetry correction provided by Rezzi et al in order to retrieve data from a recorded medium without distortion.

Regarding claims 4, 5, 7, and 20, method claims 4, 5, 7, and 20 are drawn to the method of using the corresponding apparatus claimed in claims 14, 15, and 17. Therefore method claim 4, 5, 7, and 20 correspond to apparatus claims 14, 15, and 17 and are rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

6. Claims 6, 8, 9, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The indicated objection of claims 4, 5, 7, 14, 15, and 17 are withdrawn in view of the newly discovered references. See rejections discussed above for details.

Prior Art

European Patent Application Publication No. EP 1251507 A2 is cited as of interest for disclosure of an asymmetry correcting circuit similar to the claimed invention.

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Response to Arguments

8. Applicant's arguments, see response to the previous Office action mailed March 22, 2005, filed June 24, 2005, with respect to the rejections of claims 1, 2, 8-12, 18, and 19 under 35 U.S.C. 102(b) and claims 3 and 13 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ashley et al U.S. Patent No. 6,657,802, Rezzi et al U.S. Patent No. 6,043,943, and Rezzi et al U.S. Patent No. 6,043,943.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559.

The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
September 1, 2005


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
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